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GROUP 3700

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**To:** Elizabeth Colbert, Group 3700

UNOFFICIAL

**Fax Phone:** 703-305-~~3385~~ 9835

**From:** Larry J. Guffey

**Subject:** Appl. No. 10/010,663

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~~10/27/2003~~

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6

To:

Examiner Van Nguyen, USPTO, Group 3723

Fax Phone:

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From:

Larry J. Guffey

Subject:

10/010,663

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October 27, 2003

Facsimile Transmission: 703-872-9306 746-3275 (Duration)

To: Examiner Dung Van Nguyen  
USPTO, Group 3723 (Plaza II, 11B24)

RE: Further Arguments For Allowance Regarding Application No. 10/010,663  
Att. Dkt. No. : JHUKA1  
For: "Porous, Lubricated Mixing Tube For Abrasive, Fluid Jet"

Dear Examiner Nruyen:

Thank you for returning my telephone call this morning regarding the above referenced matter.

As we agreed that I would do, given below is my attempt to more clearly point out the claimed elements of the present invention that are not shown in your cited §102(b) reference (Katz, USPN 5,921,846):

Recalling Claim 1, wherein reference signs have been added to aid in this communication:

1. An abrasive, fluid jet cutting apparatus (1) comprising:
  - a chamber (10) having an inlet (12) for receiving a pressurized fluid jet, a port (14) for receiving a flow of abrasive particles which are entrained into said fluid jet, and an exit (16) through which said fluid jet and entrained abrasives exit said chamber (10),
  - a mixing tube (20) having an entry (18) port for receiving said fluid jet and entrained abrasives, an inner wall (22) for directing the flow of said fluid jet and entrained abrasives, and an outlet (24) port through which said fluid jet and entrained abrasives exit said tube (20), wherein said tube entry (18) port is proximate said chamber exit (16),
  - a lubricating fluid reservoir (28) that surrounds at least a portion of the outer wall (26) of said mixing tube (20),
  - wherein at least a portion of said mixing tube wall being porous, and
  - wherein said lubricating fluid passes from said lubricating reservoir (28) and through said porous wall to lubricate at least a portion of the surface of said mixing tube wall so as to resist erosion of said tube wall while the fluid jet and entrained abrasives flow through said mixing tube (20).

An element of this claim that is not shown in '846 is "a port (14) (in chamber (10)) for receiving a flow of abrasive particles which are entrained into said fluid jet." See attached FIG. 4 from the application.

In your earlier Office Action, you mistakenly asserted that the chamber 2 from FIG. 1A (see attached copy) of '846 is the equivalent of the claimed chamber (10) of the present invention. You did this by repeating the applicant's claim language (i.e., "a chamber having an

inlet for receiving a pressurized fluid jet, a port for receiving a flow of abrasive particles which are entrained into said fluid jet, and an exit through which said fluid jet and entrained abrasives exit said chamber”) back to him, except that you inserted the reference sign #2 to show the part of the cited ‘846 prior art to which you were referring.

However, you did not add reference signs from the ‘846 patent which indicate the parts of the chamber 2 that you consider to be equivalent to the claimed “inlet” and “exit.” You presumably made this omission because such reference signs do not appear in the ‘846 patent. To clarify this point, I have added in the attached FIG. 1A the reference signs 2a and 2b to denoted respectively this chamber’s “inlet” and “exit.”

Additionally, you did not add a reference sign from the ‘846 patent which indicates the part of this chamber 2 that you consider to be equivalent to the claimed “port for receiving a flow of abrasive particles which are entrained into said fluid jet.”

The applicant respectfully continues to maintain that you did not add such a reference sign because FIG. 1A clearly shows that there is no such “port” that is a part of the chamber 2. Between its inlet 2a and its exit 2b, chamber 2 clearly has no other distinguishable structure in its sidewalls.

Reference sign #3 of FIG. 1A points to a “slurry source” which is upstream of the chamber’s inlet. Thus, reference sign #3 does not point to anything that could be construed to be equivalent to the “port (14)” in question.

Reference sign #5 of FIG. 1A points to a “lubricant source” whose output connects at a point that is downstream of the chamber’s exit. Thus, reference sign #5 does not point to anything that could be construed to be equivalent to the “port (14)” in question.

Continuation of this sort of analysis to all the structural elements of FIG. 1A will inevitably lead one to conclude that there is nothing in the ‘846 prior art that is equivalent to the “port (14)” in question.

Therefore, the applicant respectfully continues to maintain that you should immediately withdraw your rejection of the applicant’s Claim 1 and all those claims which depend from it (i.e., 2-12; recall that in my 8/18/03 fax to you I offered to cancel the §112 objected to claims 13, 26, 39 and 52).

A similar analysis of Claim 27 shows that it also cites in its preamble a system that has a chamber having the same claimed “port (14) for receiving a flow of abrasive particles which are entrained into said fluid jet” which was argued above is not to be found in the ‘846 prior art reference. Thus, for the same reasoning as given above, the applicant respectfully continues to maintain that you should also withdraw your rejection of the applicant’s Claim 27 and all those claims which depend from it (i.e., 28-28).

Similarly, analysis of Claim 40 shows that it also cites in its preamble a system that has a chamber having the same claimed “port (14) for receiving a flow of abrasive particles which are

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entrained into said fluid jet" which was argued above is not in the '846 prior art reference. Thus, for the same reasoning as given above, the applicant respectfully continues to maintain that you should also withdraw your rejection of the applicant's Claim 40 and all those claims which depend from it (i.e., 41-51).

Analysis of Claim 14 shows that it is, by the wording of its preamble, directed to a method that deals only with a "fluid jet with entrained abrasive particles," or what the water jet cutting industry refers to as an "abrasive water suspension jet (AWSJ)."

As I pointed out to you in my fax of 8/18/03, and as was explained in the 4/30/03 Rule 132 Declaration of the applicant, the AWSJ to which the present invention is directed is quite different than the "abrasive water jet (AWJ)" which was the subject of the '846 patent. Thus, the '846 patent discloses no methods or procedures for dealing with fluid jets having "entrained abrasive particles." In fact, no mention is made of "entrained abrasive particles" in the '846 patent.

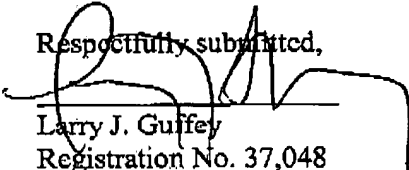
Since the applicant's Claim 14 limitation of a "fluid jet with entrained abrasive particles" is not to be found in the '846 patent, the applicant respectfully continues to maintain that you should also withdraw your rejection of the applicant's Claim 14 and all those claims which depend from it (i.e., 15-25).

I hope that the above will be helpful to you and will lead to your reconsideration of the claim rejections expressed in your current Final Office Action.

Allowance of Claims 1-12, 14-25, 27-38, and 40-51 of the present application is respectfully requested, and cancellation of the objected to Claims 13, 26, 39 and 52 is also requested.

As we discussed, I look forward to a call from you regarding this matter.

Respectfully submitted,

  
Larry J. Guffey

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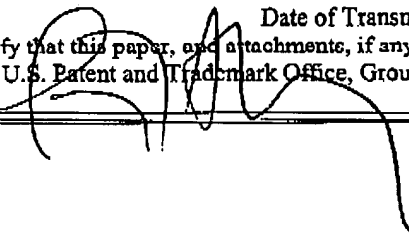
ATTORNEY FOR APPLICANT

10/27/03  
Date

CERTIFICATE OF FACSIMILE TRANSMISSION

Date of Transmission: 10/27/03

I hereby certify that this paper, and attachments, if any, is being facsimile transmitted, on the date indicated above, to the U.S. Patent and Trademark Office, Group 3723 at facsimile number 703-872-9306.

Signature: 

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